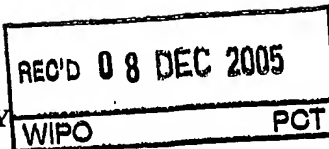


# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 532552001140	FOR FURTHER ACTION <span style="float: right;">See Form PCT/IPEA/416</span>	
International application No. PCT/US04/10388	International filing date (day/month/year) 02 April 2004 (02.04.2004)	Priority date (day/month/year) 02 April 2003 (02.04.2003)
International Patent Classification (IPC) or national classification and IPC IPC(7): A61K; C12Q 1/02 and US Cl.: 514; 435/29		
Applicant CELATOR TECHNOLOGIES, INC.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of ___ sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I      Basis of the report</p> <p><input type="checkbox"/> Box No. II      Priority</p> <p><input checked="" type="checkbox"/> Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV      Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V      Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI      Certain documents cited</p> <p><input type="checkbox"/> Box No. VII      Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII      Certain observations on the international application</p>		
Date of submission of the demand 21 October 2004 (21.10.2004)	Date of completion of this report 22 November 2005 (22.11.2005)	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	<div style="text-align: center;">              Authorized officer Daniel M. Sullivan         </div> <p>Telephone No. 703-308-0196</p>	

## Box No. I Basis of the report

## 1. With regard to the language, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4(a))
  - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☒ the international application as originally filed/furnished
- ☒ the description:  
pages 1-36 as originally filed/furnished  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the claims:  
pages 37-40 as originally filed/furnished  
pages\* NONE as amended (together with any statement) under Article 19  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the drawings:  
pages 1-6 as originally filed/furnished  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US04/10388

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 17-21

because:

☐ the said international application, or the said claim Nos. \_\_\_\_\_ relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_ are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

☒ no international search report has been established for said claims Nos. 17-21

☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.

☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.

☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13*ter*.1(a) or (b) and 13*ter*.2.

☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions, and such tables were not available to the International Preliminary Examining Authority in a form and manner acceptable to it.

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See Supplemental Box for further details

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <u>2-4,7-9,11-16 and 23-25</u>	YES
	Claims <u>1,5,6,10,22</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-16,22-25</u>	NO
Industrial Applicability (IA)	Claims <u>1-16,22-25</u>	YES
	Claims <u>NONE</u>	NO

**2. Citations and Explanations (Rule 70.7)**

Claims 1, 5, 6, 10 and 22 lack novelty under PCT Article 33(2) as being anticipated by either one of Bepler *et al.* (1986) *Cancer Res.* 46: 3413-3419 or Osaki *et al.* (2000) *Cancer Gene Ther.* 7:300-307.

Bepler *et al.* discloses studying the effect of a combination of IFN- $\alpha$ A and DL- $\alpha$ -difluoromethylornithine (DFMO) on human lung cancer cell lines. Whereas for one of the drugs there was an inhibitory effect very different for the classic and variant phenotypes, respectively, for the other drug no such distinction was observed. It was concluded that only patients suffering from the variant phenotype small cell lung cancer would benefit from a treatment regimen combining the two drugs (see abstract and p. 3417, left hand column, last paragraph to the right-hand column, last paragraph). Thus, methods of testing drugs or combinations of drugs on cells which are representative of the patients phenotype are not novel over Bepler *et al.*

Osaki *et al.* discloses the optimization of the combination of anticancer agents by studying the effect of various combinations at various concentrations on two cell lines: a human pulmonary squamous cell carcinoma cell line and a human pulmonary large cell carcinoma cell line. It is concluded that certain combinations could be used for treating non-small cell lung cancer (see abstract). For the same reasons as above the subject matter of claims 1, 5, 6, 10 and 22 lack novelty over Osaki *et al.*

Claims 1-16 and 22-25 lack an inventive step under PCT Article 33(3) as being obvious over either one of Bepler *et al.* (1986) *Cancer Res.* 46: 3413-3419 or Osaki *et al.* (2000) *Cancer Gene Ther.* 7:300-307 as applied to claims 1, 5, 6, 10 and 22 herein above. Dependent claims 2-4, 7-9, 11-16 and 23-25 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step.

Claims 1-16 and 22-25 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.